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SETTLING THE STAGGERED BOARD DEBATE

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Abstract

We address the heated debate over the staggered board. One theory claims that a staggered board facilitates entrenchment of inefficient management and thus harms corporate value. Consequently, some institutional investors and shareholder rights advocates have argued for the elimination of the staggered board. The opposite theory is that staggered boards are value enhancing since they enable the board to focus on long-term goals. Both theories are supported by prior and conflicting studies and theoretical law review articles. We show that neither theory has empirical support and on average, a staggered board has no significant effect on firm value. Prior studies did not include important explanatory variables in their analysis or account for the changing nature of the firm over time. When we correct for these issues in a sample of up to 2,961 firms from 1990 to 2013 we find that the effect of a staggered board on firm value becomes statistically insignificant after controlling for variables that affect both value and the incidence of a staggered board. Notably, we find that the adoption of a staggered board, its retention, and its removal are not random and exogenous but are rather endogenous, being related to firm characteristics and performance. The effect of a staggered board is idiosyncratic; for some firms it increases value, while for other firms it is value destroying. Our results suggest caution about legal solutions which advocate wholesale adoption or repeal of the staggered board and instead point to an individualized firm approach.

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Professor Lucian Bebchuk has engaged in two rounds of law-review-article duels with Professor Martijn Cremers and Professor Simone Sepe over classified boards. The weapons were statistics (and common sense). Cremers and Sepe wore the classified-board-stakeholder colors; Bebchuk, the agency-model-shareholder-democracy colors. Cremers' and Sepe's riposte was decisive.

--Martin Lipton

Daniel Bulaevsky[1]

Introduction

The staggered board debate has been both heated and confrontational. On the one side are those forces who argue, based in part on work by Professors Lucian Bebchuk and Alma Cohen, that the staggered board is value decreasing and entrenches directors and management.[2] On the other side is the exact opposite argument, based in part on work by Professors Martijn Cremers, Lubomir Litov, and Simone Sepe, that the staggered board instead allows directors to bargain for higher takeover premiums and hence increases firm value.[3] In recent, opposing years this debate has devolved into polemical statements from both sides often (but not always) citing key empirical studies on the issue.[4] These studies and this debate have driven recent law review policy proposals calling for either banning the staggered board or making the staggered board mandatory for all companies.[5] Studies finding negative wealth effects of a staggered board have

[1] Martin Lipton & Daniel Bulaevsky, *Wachtell Lipton Discusses the Classified Board Duels*, COLUMBIA BLUE SKY BLOG, July 6, 2017, available at http://clsbluesky.law.columbia.edu/2017/07/06/the-classified-board-duels/

[2] *See* Lucian Bebchuk & Alma Cohen, *The Costs of Entrenched Boards*, 78(2) J. FIN. ECON. 409 (2005). *See also* Lucian Bebchuk, Alma Cohen & Alan Ferrell, *What matters in corporate governance?*, 22(2) REV. FIN. STUD. 783 (2009); James M. Mahoney & Joseph T. Mahoney, *An Empirical Investigation of the Effect of Corporate Charter Antitakeover Amendments on Stockholder Wealth*, 14 STRAT. MANAG. J. 17 (1993).

[3] *See* Martijn J. Cremers, Lubomir P. Litov and Simone M. Sepe, *Staggered Boards and Long-Term Firm Value, Revisited*, J. FIN. ECON. (forthcoming) (electronic copy available at http://ssrn.com/abstract=2364165). *See also* Martijn J. Cremers & Alan Ferrell, *Thirty years of shareholder rights and firm valuation*, 69(3) J. OF FIN.1167 (2014); David F. Larcker, Gaizka Ormazabal, and Daniel J. Taylor, *The Market Reaction to Corporate Governance Regulation*, 101 J. FIN. ECON. 431 (2011); Tom Bates, Becher and Lemmon, *Board classification and managerial entrenchment: Evidence from the market for corporate control*, 87(3) J. FIN. ECON. 656 (2008) (finding that a staggered board reduces the likelihood of receiving a takeover bid, though the economic effect is marginal).

[4] *See* Brian Baxter, *Spat over Staggered Boards Pits Wachtell Against Harvard's Bebchuk*, AM. LAW DAILY, Mar. 21, 2012, http://amlawdaily.typepad.com/amlawdaily/2012/03/wachtell-harvard-shareholder.html. It has also led to allegations of illegality. *See* Daniel N. Gallagher and Joseph Grundfest, *Did Harvard Violate Federal Securities Law? The Campaign Against Classified Boards of Directors* (December 10, 2014), Rock Center for Corporate Governance at Stanford University Working Paper No. 199, available at https://ssrn.com/abstract=2536586 or http://dx.doi.org/10.2139/ssrn.2536586.

[5] *See generally* Lucian A. Bebchuk, *The Myth That Insulating Boards Serves Long-Term Value*, 113 COLUM. L. REV. 1637, 1644 (2013) ("[T]he existing theoretical understanding and the available empirical evidence do not support the claims of insulation advocates. Going forward, public officials and institutional investors would do well to reject arguments that are based on the asserted long-term benefits of board insulation."); Martijn Cremers & Simone Sepe, *The Shareholder Value of Empowered Boards*, 68 STAN. L. REV. 67, 105 (2016) (asserting that prior staggered board studies "are intrinsically limited in their ability to address endogeneity concerns—that is, the ever-present risk that

also undergirded a campaign by the Harvard Law School Shareholder Rights Project (the "Harvard Rights Project") to push publicly-traded companies in the S&P 500 to eliminate their staggered boards.[6]

This article sorts through this debate, gives clarity to the policy arguments and provides an assessment of these empirical studies. We do so by analyzing the empirical and theoretical issues with studies both supporting and disparaging the staggered board. We then conduct our own empirical analysis of prior studies to determine their validity. We show that contrary to the prior, major studies *a staggered board has no significant effect on firm value*.

We begin by theorizing that prior studies are not robust to different estimation models. Specifically, when a regression is performed, explanatory variables are included to identify their effect on the main variable, known as the dependent variable. For example, if we wanted to ascertain the effect of irrigation on plant growth (i.e., on performance), plant growth would be our dependent variable with irrigation as an explanatory variable together with other variables that affect plant growth such as fertilization, cultivation and weather conditions. The goal would be to isolate the effect of irrigation by considering all the relevant factors that make plants grow. Because farmers who are careful about irrigation also diligently fertilize and cultivate the plants. Omitting the last two variables may incorrectly attribute their effects on plant growth to irrigation alone. In the case of the staggered board the dependent variable is the firm's market value (relative to its assets), and the main explanatory variable is the presence or absence of a staggered board, controlling for other firm characteristics that affect firm value. To obtain a good assessment of the relationship of firm value and the staggered board, it is important to include the main variables that effect the presence or absence of a staggered board to tease out the full relationship between the variables.

We show that prior studies, including the study by Professors Bebchuk and Cohen, do not include important explanatory variables in their analyses that affect firm value and at the same

correlation might be mistaken for causation."). *See also* Martin Lipton & Steven A. Rosenblum, *A New System of Corporate Governance: The Quinquennial Election of Directors*, 58 U. CHI. L. REV. 187 (1991) (advocating five-year terms for the election of directors).

[6] *See* Harvard Shareholder Rights Project, available at http://www.srp.law.harvard.edu/companies-entering-into-agreements.shtml (providing details on the work of the Harvard Shareholder Rights Project). *See also* Martijn K.J. Cremers and Simone M. Sepe, *Board declassification activism: The financial value of the shareholders rights project*, at 5-6, Working paper, University of Notre Dame, Feb. 2017 (electronic copy on file with author) (discussing the work of the Harvard Shareholder Rights Project) (reviewing the work of the Harvard Shareholder Rights Project and its empirical foundations).

time are correlated with the presence or absence of a staggered board.[7] The result is that these studies have inappropriately attributed a lower firm value to the presence of the staggered board instead of to these omitted variables. To illustrate with another example, while the birth of baby lambs is positively correlated with the arrival of storks, it is not that storks bring baby lambs. Rather, both are positively affected by the spring weather that causes the arrival of both. If we omit the spring weather from a model we may infer erroneously from the lambs-storks correlation that the former is affected by the latter. In the case of the staggered board, once we include our identified, omitted variables – which are firm characteristics – there is no longer a significant relation between a staggered board and firm value.

We make this finding by first estimating the effect of a staggered board on firm value across firms and over time, employing the explanatory variables used in prior studies. Using data compiled by Institutional Shareholder Services ("ISS") and its predecessors, we examine the effect of a staggered board on up to 2,961 firms over a time span of 23 years for a total of up to 27,016 firm-years.[8] Our initial results show that firm value is negatively affected by a staggered board, which is consistent with the prominent study of Bebchuk and Cohen. This is notable since the Bebchuk and Cohen study ended in 2002 and we extend it until 2013 with a similar result.[9] However, the effect of staggered board becomes insignificant once related explanatory variables are included in our analysis. Putting this result another way, Bebchuk and Cohen's analysis does not include important variables related to both firm value and the incidence of the firm having a staggered board. The inclusion of these variables renders the effect of a staggered board on firm value insignificant. In particular, we find that the negative firm value-staggered board relation becomes insignificant once we include in the model an entrenchment index of other corporate governance measures in the firm developed by Bebchuk, Cohen, and Ferrell.[10]

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[7] *See infra* Part III.B.a.

[8] In some of our models, we use a dataset of 1,959 firms over a time span of 21 years for a total of 15,921 firm-years due to data limitations. Consistent with the findings of Professors Larcker, Reiss and Xiao, we find that there are significant coding errors in this database. *See* David F. Larcker, Peter C. Reiss and Youfei Xiao, *Corporate Governance Data and Measures Revisited* (Rock Center for Corporate Governance at Stanford University, Working Paper No. 211, 2015), http://dx.doi.org/10.2139/ssrn.2694802 (finding that "the IRRC coding and one commercial source of corporate governance data disagree significantly for several important governance indicators. Our own review of source documents uncovered measurement errors in the IRRC summaries, especially for golden parachutes and supermajority voting provisions."). We discuss this *infra* at Part III.A

[9] Bebchuk & Cohen, *supra* note 2, at 410.

[10] This index was first proposed in Lucian Bebchuk, Alma Cohen and Alan Ferrell, *What matters in corporate governance?*, 22(2) REV FIN. STUD. 783 (2009). The provisions included in the index are limits to shareholder bylaw amendments, limits to amend the corporate charter, poison pills, golden parachutes, and supermajority requirements for mergers and charter amendments. The original index also includes the staggered board which we however omit as we include it as a separate variable.

This leads to the conclusion that the firm value effects of a staggered board are driven by other variables and not by the staggered board itself.

We next turn to studies that have shown that the staggered board enhances value, examining the most prominent study in this area, that of Cremers, Litov, and Sepe.[11] The authors' empirical strategy is to add firm fixed effects to the models of Bebchuk and Cohen. These effects control for unobserved individual firm characteristics that are time invariant and purportedly account for the idiosyncratic nature of the firm. This methodology attempts to address the omitted variable problem of the Bebchuk and Cohen study.

We replicate the Cremers, Litov, and Sepe methodology and find similar results. However, given that our sample spans 23 years (1991-2013) and firm fixed effects are by definition constant over this period, it is unlikely that all firms have invariable characteristics over this long period of time. Rather, we know that some firms choose to stagger their boards and other firms decide to de-stagger their boards. It is likely that these decisions are undertaken because for some firms there are changes in unobserved characteristics and conditions over time. We therefore split the sample into two sub-periods and estimate the model for each sub-period. When we make this adjustment to account for the varying effect of firm fixed effects, we find that a staggered board has no significant effect on firm value in any of the two sub-periods.

Our results thus find shortcomings in both sides of the debate. They also highlight the sensitivity of any analysis of the staggered board and firm value to the choice of variables and models. To the extent that variable selection produces such different results, they highlight the unreliability of prior studies concerning the wealth effects of the staggered board s.

We also address the fact that having a staggered board – its adoption, retention or removal – is a result of a decision made by the firm. In other words, the estimated effect of a staggered board may reflect the consequences of the factors that led to the decision rather than resulting from the presence or absence of a staggered board. We correct for this problem by employing an instrumental variable estimation method, which is detailed in Section III.d. infra. In this analysis, we find that the value effect of a staggered board becomes insignificantly different from zero.

We conclude by examining the policy implications of our findings. Our analysis means no definitive conclusion can be made at this time as to the positive or negative wealth effects of a

[11] Cremers, et. al, *supra* note 3.

staggered board. In terms of wholesale policy efforts to adopt or repeal staggered boards, our results suggest caution. We find that staggered boards appear to be affected by firm characteristics that account for its decision on adoption, retention, and removal of the staggered board provision, which are partially unobserved to researchers or cannot be quantified for the purpose of research. They ultimately highlight the theoretical proposition that the staggered board is endogenous, and that the decision to adopt (or not) the staggered board is unique to each firm and its characteristics.[12] In some firms the staggered board may be value enhancing, in others value destroying. Therefore, the battle over the staggered board must be fought over each individual firm and whether it is appropriate for that specific firm.

More generally, our results provide evidence for measured skepticism of corporate governance studies and their implications for the structure of the board of directors generally. We conclude by analyzing various legal proposals related to the staggered board, and find that our results suggest caution about each of them. The rhetoric unfortunately does not match reality and the staggered board is neither value decreasing or enhancing overall. Instead, it appears a firm-specific approach should be adopted for the staggered board.

II. Background

A. The Theoretical Effect of the Staggered Board

The staggered board, sometimes called a classified board, is a mechanism which allows a board of directors to be elected to staggered terms, typically over three years, rather than annually.[13] In a staggered board, one-third of directors are elected in any given year, meaning it takes two years to replace a majority of the directors. The staggered board can thus make a hostile takeover significantly more difficult due to the existence of a shareholder rights plan, also known as a poison pill. A poison pill prevents a hostile bid from succeeding unless the hostile bidder replaces a majority of a target's directors in order to have the new directors remove the poison pill and allow the hostile bid to proceed.[14] But a staggered board requires that a hostile

[12] In Section III.B.d below we explore the problem of endogeneity and describe how we resolve it based on further analysis that we have done in detail.

[13] The staggered board is a statutory mechanism permitted by the Delaware General Corporate Law for companies incorporated in Delaware. *See* D.G.C.L. § 141.

[14] *See* Steven M. Davidoff, *Airgas and the Value of Strategic Decision-Making*, COLUM. BUS. L. REV. 502, 508-509 (2012) (outlining the common board strategy of adopting a poison pill to inhibit a hostile takeover from succeeding, requiring a hostile bidder to run a proxy contest).

bidder run proxy contests over two annual stockholder meetings to replace a majority of the board. The time and cost of such an uncertain endeavor can deter a hostile bidder.[15]

Over 50 years ago Henry Manne theorized that the market for corporate control served as a disciplining force for managers.[16] An unconstrained takeover market would ensure that companies are run more efficiently. This theoretical idea has served as the premise for the studies which have found the staggered board to be value decreasing. By protecting management from removal, the staggered board entrenches poorly performing management and firm inefficiencies.[17] Thus opponents of the staggered board rely on Manne's theory and studies of staggered boards to oppose anti-takeover defenses generally. In this regard, the staggered board together with the poison pill is considered one of the most powerful takeover defenses a U.S. company can have.[18]

While those who favor a free market for corporate control oppose the staggered board, the opposite view has been taken by those who believe that firms should be allowed to defend themselves against hostile takeovers and that the decision to sell the company should remain with the board of directors. These arguments have been put forth most vigorously by Marty Lipton, the inventor of the poison pill.[19] He and other proponents claim that a staggered board helps firms maintain stability and continuity within the board and enables management to pursue long-term strategic plans.[20] Absent a staggered board such plans could be frustrated by a hostile

[15] Bates, et al., *supra* note 3 (finding that a staggered board reduces the likelihood of receiving a takeover bid, though the economic effect is marginal); Lucian Arye Bebchuk, John C. Coates IV & Guhan Subramanian, *The Powerful Antitakeover Force of Staggered Boards: Theory, Evidence, and Policy*, 54 STAN. L. REV. 887, 925–39 (2002) (finding that in a sample of hostile bids from 1996-2000, a target with an effectively implemented staggered board was twice as likely to remain independent when subjected to a hostile bid).

[16] *See* Henry G. Manne, *Mergers and the Market for the Corporate Control*, 75 J. OF POL. ECON. 110 (1965) (theorizing that the unconstrained takeover market acts as a disciplining force on management).

[17] *See generally* Bebchuk, *supra* note 5, at 1638. *See also* Andrei Shleifer & Robert W. Vishny, *A Survey of Corporate Governance*, 52 J. FIN. 2 (1997) (outlining the fundamental issues in corporate governance and the desire to address the separation of ownership from control it addresses).

[18] *See* Bebchuk et. al, *supra* note 15.

[19] *See* Martin Lipton, *Pills, Polls, and Professors Redux*, 69 U. CHI. LAW REV. 1037, 1039 (2002) (arguing that the purpose of takeover defenses is to "preserve the ability of the board of directors of a target of a hostile takeover bid to control the target's destiny and, on a properly informed basis, to conclude that the corporation remain independent.")

[20] Mark Gordon, *Takeover Defenses Work. Is That Such a Bad Thing?*, 55 STAN. L. REV. 819, 837 (2002) (arguing that staggered boards "ensure that the balance of bargaining power between acquirers and targets does not ebb and flow based solely on the timing of the target's annual meeting").

offer or could make management forgo value-increasing long-term projects that appear unprofitable in the short term.[21]

A staggered board thus provides more latitude to a board of directors to manage the firm towards long term goals. A staggered board can also strengthen managers' bargaining power against hostile bidders, thus enabling the extraction of better terms for the target firm, and could also benefit stockholders by enabling the target firm to better evaluate competing bids.[22] Finally, board members who serve for a longer period of time have more power to oversee the firm and discipline the firm's chief executive officer potentially increasing firm value. Consistent with this contrasting theory, the adoption (removal) of a staggered board should be found to increase (reduce) value.Prior Research

The theoretical underpinnings of the staggered board are subject to empirical testing. More specifically, if the staggered board is entrenching poorly performing management or otherwise deleterious to the firm, its adoption (repeal) should decrease (increase) firm value. Conversely, if a staggered board is beneficial to firms by permitting management to undertake more long term value enhancing projects or other beneficial measures, the adoption (removal) of a staggered board should be found to increase (decrease) value.

The primary set of studies on the effect of the staggered board have examined staggered board adoptions or rejections over a series of time.[23] The most prominent and important study in

[21] Proponents of this theory often claim that these issues will arise because of misinformed or misguided shareholders who, without the restraints offered by the staggered board, would push management to undertake action which is not value maximizing. This problem has been highlighted by Professors Goshen and Squire who describe it as a principal cost problem. *See* Zohar Goshen and Richard Squire, *Principal Costs: A New Theory for Corporate Law and Governance*, 117 COLUMBIA L. REV. 767 (2017).

[22] Richard H. Koppes, Lyle G. Ganske and Charles T. Haag, *Corporate Governance Out of Focus: The Debate Over Classified Boards*, 54 BUS. LAW. (1999) (arguing that staggered boards are an effective mechanism which enhances corporate governance); Martin Lipton & Theodore Mirvis, *Harvard's Shareholder Rights Project is Wrong*, Harvard Law School Forum on Corporate Governance and Financial Regulation (July 7, 2016), https://corpgov.law.harvard.edu/2012/03/23/harvards-shareholder-rights-project-is-wrong/ (stating that "it is our experience that the absence of a staggered board makes it significantly harder for a public company to fend off an inadequate, opportunistic takeover bid, and is harmful to companies that focus on long-term value creation."). *See also* Leo E. Strine, Jr., *Can We Do Better by Ordinary Investors?: A Pragmatic Reaction to the Dueling Ideological Mythologists of Corporate Law*, 114 COLUM. L. REV. 449, 450-51 (2014).

[23] The first set of studies exploring the wealth effects of staggered boards analyzed stock price movements around the time of the staggered board adoption/rejection. These studies examined the excess returns on company stock surrounding the time of adoption or rejection of a staggered board by companies, attempting to measure the wealth effects of the staggered board through stock price reactions. The results in these studies were mixed. Jarrell and Paulson found that the effect of the staggered board was statistically weak and abnormal returns around staggered board announcements were insignificant. George A. Jarrell & Annette B. Poulsen, *Shark Repellents and Stock Prices: The Effects of Antitakeover Amendments Since 1980*, J. FIN. ECON. 127, 141-144 (1987). *See also* James M. Mahoney, *An Empirical Investigation of the Effect of Corporate Charter Antitakeover Amendments on Stockholder Wealth*, STRAT. MGM'T J. 17 (1993) (event study of 409 firms from 1974-1988 finding a strong negative shareholder wealth effect around staggered board adoptions). In contrast, however, a later study by Guo, Kruse, and Nohel finds that the de-staggering of corporate boards significantly increases stock prices by approximately one percent in a matched

this group is by Professors Bebchuk and Cohen. The authors find that a staggered board decreases firm value as measured by Tobins' Q. Tobin's Q is a measure of firm value,[24] calculated as the ratio of the firm's market value to its book value of assets.[25] Bebchuk and Cohen find that the negative effect of staggered board on the firm's Tobin's Q is in the range of 16%-17% over the entire time period. After 1990, Bebchuk and Cohen find that the negative effect of a staggered board on Tobin's Q is nearly 7%.[26]

Professors Bates, Becher, and Lemmon doubt that the value effect of a staggered board that is associated with the ease of takeover can produce the large effect on value that is documented by Bebchuk and Cohen.[27] They find that the effects on target firm value of hostile bids are similar for firms with and without classified boards.[28] In addition, Bates, Becher, and Lemmon find that a bidder's stock price reaction upon the time of bid announcement is lower by 2.7% if the target firm has staggered board. Bates, Becher, and Lemmon interpret these findings as follows:

> These results are not consistent with the notion that classification, on average, facilitates self-dealing by incumbent managers at the expense of target shareholders. Instead, the findings indicate that, consistent with the shareholder interest hypothesis, bidders fare worse when negotiating takeover bids with targets with a classified board structure.[29]

However, Bates, Becher, and Lemmon find that a staggered board significantly reduces the likelihood of receiving a takeover bid. They calculate that "eliminating the deterrence effect associated with board classification increases the implied value of firms by only 1.1%."[30] This estimate seems far smaller than the effect of a staggered board on firm value estimated by Bebchuk and Cohen. It is hard to translate this to the effects on value, ceteris paribus, since

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sample of 188 companies. Rejin Guo, Timothy A. Kruse and Tom Nohel, *Undoing the Powerful Anti-Takeover Force of Staggered Boards*, 14 J. CORP. FIN. 274 (2008).

[24] There are critics of the use of Tobin's Q as a device to measure firm value, but it is the common metric used in the staggered board studies to date. *See* Philip H. Dybvig & Mitch Warachka, *Tobin's q Does Not Measure Firm Performance: Theory, Empirics, and Alternatives* (March 5, 2015), available at https://ssrn.com/abstract=1562444 or http://dx.doi.org/10.2139/ssrn.1562444.

[25] The authors also find evidence that a staggered board placed in the corporate charter is determinative of value rather than one placed in the bylaws. In the latter case, the authors find that there is no lower value effect, a circumstance likely attributable to the fact that shareholders can unilaterally amend a by-law to remove a staggered board. Bebchuk & Cohen, *supra* note 2, at 429 (table 5). *See also* Olubunmi Faleye, *Classified boards, firm value, and managerial entrenchment*, 83 J. FIN. ECON. 501, 507 (2007) (finding a similar value decreasing effect on Tobin's Qs among firms with staggered boards).

[26] Bebchuk & Cohen, *supra* note 2, at 423-426. The Tobin's Q figures in Bebchuk and Cohen's analysis are adjusted for the industry median. *Id.*

[27] Bates et al., *supra* note 15, at 657.

[28] *Id.* at 669.

[29] *Id.* at 669.

[30] *Id.* at 674. *See also* Bebchuk, Coates and Subramanian, *supra* note 15.

Bebchuk and Cohen do not report the means and medians of the firms' market to book values in their analysis, a necessary predicate to such calculation. But assuming for simplicity that the median Tobin's Q for the economy is 1, it means that the negative effect of staggered board on firm value as estimated by Bebchuk and Cohen is between 6 and 16 times greater than that estimated by Bates, Becher, and Lemmon. One conclusion from this analysis is that the large negative effect of staggered board on firm value documented by Bebchuk and Cohen, can hardly be accounted for by the fact that a staggered board impedes the replacement of inefficient management.

A prominent recent study by Cremers, Litov and Sepe attempts to reexamine the value effect of a staggered board. The authors highlight the omitted variable problem of the Bebchuk and Cohen study. They address this problem by using firm fixed effects in their regressions. By using firm fixed effects Cremers, Litov, and Sepe examine the effects of staggering and destaggering over time on firm values while holding the firms' unobserved characteristics constant through time. Through this method they attempt to address the omitted variable problem of Bebchuk and Cohen. They conduct their study over the period 1978-2015 among 3,076 firms, finding that staggering the board increases Tobin's Q while destaggering it decreases this value measure.[31] These authors adopt a matched sample approach, in which a "firm with a changing board structure in a given year is matched to a firm with the same ex-ante board structure and similar observable characteristics that relate to board structure." They find that there is a positive (negative) relation between the adoption (deletion) of a staggered board and firm value.[32]

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[31] Cremers, Litov & Sepe, *supra* note 2. *See also* Martijn Cremers & Simone Sepe, *The Shareholder Value of Empowered Boards*, 68 STAN. L. REV. 67, 72 (2016) (finding that "Adopting a staggered board ('staggering up') is associated with a statistically and economically significant increase in firm value, while decisions to destagger a board ('staggering down') are associated with a corresponding reduction in firm value.")

[32] These results naturally depend on the quality of the match between firms that are subject to the change in staggered board and those that serve as control firms. A similar result is also obtained in the study of Cremers and Ferrell. Cremers & Ferrell, *supra* note 3. Ge, Tanlu and Zhang estimate the consequences of de-staggering the board in a sample of 384 firms, employing a method that accounts for the reasons for doing so. They find that de-staggering does not improve firm performance. Weili Ge, Lloyd Tanlu & Jenny Li Zhang, *Board Destaggering: Corporate Governance Out of Focus?*, (Mar. 29, 2016) (working paper) (electronic copy available at https://ssrn.com/abstract=2312565). Larcker, Ormazabal, and Taylor examine a sample of 3,451 companies during the period from 2007 through 2009 examining excess returns in light of proposed legislation affecting staggered boards. They find that firms with staggered boards experience negative excess returns when legislation is proposed which would prevent the usage of staggered boards. Larcker, Ormazabal & Taylor, *supra* note 3. *See also See also* Robert Daines & Michael Klausner, *Do IPO Charters Maximize Firm Value? Antitakeover Protection in Ipos*, J. LAW ECON & ORG. (2001) (analyzing 310 firms at IPO stage and presence or absence of a staggered board does not appear correlated with value maximizing principles).

In sum, the evidence on the value of staggered boards is mixed. The Bebchuk and Cohen study has found that the staggered board has a wealth decreasing effect. However, Cremers, Litov, and Sepe have found that the staggered board has wealth increasing effect. The differences between the studies is attributable to the different methods that they employ to account for omitted variables, a topic we take up below.

B. The Policy Dispute

The contrasting empirical research on staggered boards has produced differing policy prescriptions, markedly affecting the governance of corporate America. Based on the theoretical and empirical findings against staggered boards, a number of academics have proposed that public companies be forbidden from adopting staggered boards. Professor Lucian Bebchuk, the co-author of the Bebchuk and Cohen study, argues for a general policy disfavoring staggered boards, though not one enshrined in law.[33] Bebchuk argues that empirical studies as of 2013 "indicate the long-time persistence and robustness of the documented association between stronger board insulation and poorer firm performance."[34] More specifically, Bebchuk impliedly though not explicitly argues against the staggered board en toto.

Lucian Bebchuk also started the Shareholders Rights Project at Harvard Law School to put forth this position into reality. The Project's goal was to represent institutional shareholders with respect to shareholder proposals asking firm boards to repeal their staggered board. The project was very successful. It targeted 129 companies in the S&P 500 with shareholder proposal, and of these 121 subsequently destaggered, eliminating their staggered board.[35]

Not surprisingly, proponents of the staggered board have vigorously objected tothe Harvard Rights Project. The law firm Wachtell Lipton Rosen & Katz, LLP has opposed this project in the belief that it encouraged company "short-termism".[36] In a memo to clients outlining its opposition Wachtell had stated that "it is our experience that the absence of a staggered board ... is harmful to companies that focus on long-term value creation," and that removing staggered boards "would exacerbate the short-term pressures under which American companies are forced to operate."[37] Separately, Professor Joe Grundfest and then SEC-

[33] *See* Bebchuk, *supra* note 5.
[34] *Id.* at 1684.
[35] *See* Lucian Bebchuk, Scott Hirst & June Rhee, *Towards the Declassification of S&P 500 Boards*, 3 HARVARD BUS. L. REV. 157 (2013) (detailing the achievements of the Harvard project on declassifying boards).
[36] *See* Bebchuk, *supra* note 5, at 1642.
[37] Martin Lipton, Theodore N. Mirvis, Daniel A. Neff & David A. Katz, Wachtell, Lipton, Rosen & Katz, *Harvard's Shareholder Rights Project Is Wrong*, The Harvard Law Sch. Forum on Corporate Governance & Fin. Regulation

commissioner Daniel Gallagher wrote an article entitled *Did Harvard Violate Federal Securities Law? The Campaign Against Classified Boards of Directors*.[38] In it they argued that the Harvard Rights Project violated federal securities laws since in its shareholder proposals to repeal the staggered board, the project failed to cite the countervailing empirical evidence. This constituted a violation of Rule 14a-9 promulgated under the Securities Exchange Act of 1934.[39]

The research on the beneficial effect of staggered boards has also produced law review proposals encouraging staggered board adoptions. Thus, Cremers and Sepe who find that the staggered board is value enhancing, propose the adoption of a "quasi-mandatory" rule for staggered boards.[40] Based on the research of Professors Ian Ayres and Robert Gertner on the effect of penalty default rules and their role in personal choice, Cremers and Sepe propose that all public companies be required to have a mandatory staggered board.[41] A public company board would have exclusive authority to opt out of this rule by proposing a staggered board waiver, but contrary to current law, the shareholders of the company could not do so.[42] Cremers and Sepe concomitantly propose that Rule 14a-8 under the Securities Exchange Act of 1934 be amended to preclude shareholder initiated staggered board proposals.[43] Even if the board endorsed a staggered board opt-out it would require approval of a super-majority of two-thirds of the company's shares.[44] The authors state that this is a quasi-mandatory rule that:

> [w]ould substantially reduce the leverage that activist shareholders currently have against boards and, in turn, the risk of coerced board approval to destagger. In its strongest version, this proposal would also involve rolling back majority voting standards by mandating the adoption of plurality voting standards. This additional reform would eliminate the ability of shareholders to use withhold campaigns to induce a corporation's directors to dismantle a staggered board.[45]

(March 23, 2012, 10:38 AM), http://blogs.law.harvard.edu/corpgov/2012/03/23/harvards-shareholder-rights-project-is-wrong

[38] *See* Grundfest & Gallagher, supra note 4.

[39] *Id.* at 42-61.

[40] Cremers & Sepe, *supra* note 31, at 138.

[41] *Id.* Ian Ayres and Robert Gertner have argued that "Penalty defaults are designed to give at least one party to the contract an incentive to contract around the default rule and therefore to choose affirmatively the contract provision they prefer. In contrast to the received wisdom, penalty defaults are purposefully set at what the parties would not want-in order to encourage the parties to reveal information to each other or to third parties (especially the courts." *See* Ian Ayres & Robert Gertner, *Filling Gaps in Incomplete Contracts: An Economic Theory of Default Rules*, 99 YALE L. J. 87, 91 (1989).

[42] Cremers & Sepe, *supra* note 5, at 138.

[43] *Id.* at 139.

[44] *Id.*

[45] *Id.*

Cremers and Sepe argue that their value effects are caused by shareholders who are short-termist in nature and thus do not support long term efforts by the board to create shareholder value in firms without a staggered board. The two state that "[t]his Article asserts that the promotion of long-term specific investments and the related need to ensure optimal stakeholder investments are the primary channels through which a staggered board increases firm value."[46] In this vein the authors do not adopt a *per se* mandatory rule because of the appearance of socially beneficial bargaining. They state that "it is still possible that there will be a subset of companies for which destaggering could pass a social cost-benefit threshold. For example, liquidity needs could persuade directors to accept the requests of prospective investors to destagger the board in exchange for the injection of much-needed capital."[47]

The debate over the staggered board has thus become one of conflicting views in different studies. For example, Bebchuk has criticized the law firm Wachtell, Lipton, Rosen & Katz LLP for their opposition to the Shareholder Rights Project. He has argued that Wachtell's premise is faulty since "[c]ontrary to what insulation advocates commonly presume, the existence of inefficient capital markets and short investor horizons does not imply that the long-term effects of board insulation are positive overall."[48] More specifically, on both a theoretical and empirical basis, regulators are not justified in supporting the staggered board in order to enhance long term value.

The debate has reached a boil as Professors Cremers and Sepe published *Board Declassification Activism: The Financial Value of the Shareholder Rights Project* in draft form.[49] In that article they analyzed the effect on firm value of cases of board de-staggering that resulted from the firm being targeted by the Harvard Rights Project during the years 2012-2014, comparing them to cases of board de-staggering without being targeted by the Harvard Rights Project. The authors argue that based on their findings "board declassification in Harvard Rights Project targets is associated with a statistically significant reduction in firm value."[50] Professors Bebchuk and Cohen quickly replied disputing this conclusion and arguing that:

> [O]n a close reading, the results of [Cremers and Sepe] fail to provide support for opposing declassifications. When these results are appropriately interpreted, they provide some significant evidence that declassifications are beneficial and no evidence that

[46] *Id.* at 140.
[47] *Id*.
[48] Bebchuk, *supra* note 5, at 1642.
[49] Cremers & Sepe, *supra* note 6.
[50] *Id.* at 5.

> declassifications are value-reducing. Furthermore, the results presented in the authors' prior published work relating to preceding years do not hold, and indeed are substantially reversed, for the period considered by their current study. On the whole, the results of the current study undermine the authors' prior recommendations in support of staggered boards.[51]

The net result is that diametrically opposed policy proposals are being put forth which are based on diametrically opposed empirical research. We aim to sort through this evidence with respect to the main studies.

C. Our Empirical Strategy

We posit that prior studies on the long term value effect of staggered boards suffer from the omitted variable problem we highlighted above. In order to address this issue, we replicate the Bebchuk and Cohen study but add in additional variables which might affect the adoption or deletion of the staggered board and at the same time directly affect firm value. In this way we hope to get closer to accounting for the full array of reasons for a staggered board adoption.

Our goal is to determine if it is the staggered board that is affecting firm value in the analysis or other variables which might engender a firm to adopt a staggered board that are affecting the analysis. For example, it may be that firms with poor return on assets are more likely to adopt a staggered board to prevent a takeover of the firm at a low price and enable it to improve its poor performance. In such a case it is not the staggered board which is value reducing but the fact that the firm has suffered a poor return on assets. The staggered board in this scenario is only a symptom. By adding additional variables we can better determine the attributes driving a staggered board adoption.

Second, we analyze the use of firm fixed effects. Cremers, Litov, and Sepe adopt this approach to address the omitted variable problem.[52] By using fixed effects the authors account for the unobserved features of the firm. By doing so they allow the effect of the staggered board to be isolated. However, we theorize that fixed effects change over time. In order to address this issue we replicate the Cremers, Litov, and Sepe study but divide the analysis into two periods. This allows us to measure the effect of firm fixed effects over a more discrete period of time to

[51] Lucian Bebchuk & Alma Cohen, *Recent Board Declassifications: A Response to Cremers and Sepe* (May 1, 2017), available at: https://ssrn.com/abstract=2970629 or http://dx.doi.org/10.2139/ssrn.2970629

[52] Cremers, Litov and Sepe, *supra* note 3.

see if changing characteristics of the firm are responsible for the value changes Cremers, Litov, and Sepe find.

III. Empirical Findings

A. Dataset

Our dataset is the same as the one used by Bebchuk and Cohen, expanded to include later years. We use the data compiled by the Investor Responsibility Research Center ("IRRC") during the period 1995 to 2006. The IRRC data were available for 1990, 1993, 1995, 1998, 2000, 2002, 2004, and 2006. After 2005, the database changed its name to RiskMetrics first and then ISS and in 2007 began publishing annual data. In the period 1990-2006, we follow Professors Gompers, Ishii, and Metrick and Professors Bebchuk, Cohen, and Ferrell and others and assume that a firms' governance provisions as reported in a given IRRC volume remained in place during the period following the publication of the volume until the publication of the subsequent volume.[53]

The dataset we utilize includes up to 2,961 firms over a time span of between 21 and 23 years for a total of up to 27,016 firm-years, depending on the model employed.[54] As observed by Professors Larcker, Reiss, and Xiao we too find coding errors in the ISS database.[55] We correct by hand any errors we find regarding the staggered board status of firms. Our corrections constitute approximately 0.5% of staggered board observations.[56] Our analysis is conducted with the corrected dataset. In unreported results, we also run each analysis on the uncorrected dataset and find no significant difference in our results. For stock prices we use the Center for Research in Security Prices ("CRSP") database and for accounting information we use the COMPUSTAT database and for acquisition data we use Thomson SDC. For institutional holdings we use the Thomson 13F database and for insider holdings we use S&P's ExecuComp database.

We exclude from our dataset Real Estate Investment Trusts and firms with dual-class shares.[57] In addition, we trim the sample in each year by deleting firms that have the highest and

[53] *See* Paul Gompers, Joy Ishii and Andrew Metrick, *Corporate Governance and Equity Prices*, 118(1) Q. J. ECON. 107 (2003); Bebchuk, Cohen and Ferrell, *supra* note 1.
[54] We begin with a larger dataset. The remaining data are after we employ filters which are detailed in the text.
[55] Larcker, Reiss and Xiao, *supra* note 8, at 1.
[56] Since we do not recreate the entire database by hand, we cannot be certain that our corrections are comprehensive. More specifically our strategy to double-check the IRCC database is to recode by hand any company who has switched the staggered board at least three times (e.g., adopting a staggered board, dropping it, and adopting it again or the other way around).
[57] This is consistent with Bebchuk and Cohen. Bebchuk & Cohen, *supra* note 2.

lowest 1% of the distribution of lagged size (market capitalization). Micro-size firms are non-consequential and very large firms are less likely to become takeover targets. We delete an entire industry if all firms in that industry either have a staggered board or do not have a staggered board.[58] We also code all firms incorporated in the state of Massachusetts as having a staggered board given that this state adopted a staggered board statute in 1990 and even in firms that opted out of the requirement, management can re-adopt it at will meaning every Massachusetts company has a latent staggered board.[59]

B. Examining the Effect of a Staggered Board on Firm Value

a. The Staggered Board and Omitted Variables

We begin by examining the characteristics of our sample. Table A1 in the appendix presents descriptive statistics for the variables we employ. Among the firm-years in the sample, nearly 60 percent of the firm-years have a staggered board. We observe that among the firm-years in the sample, the mean of Staggered Board, a variable which measures if the firm has a staggered board or not, is 0.592 which means that about 60 percent of the firm-years have a staggered board. We also find that the median firm age in our sample is 22 years, meaning that there is a significant number of companies which have survived over an extended period of time. Consistent with other studies, .589 of the firms in our sample or approximately 59% are Delaware firms, meaning the staggered board is ubiquitous across jurisdictions.

In Table 1 we turn to estimation of the determinants of the firms' Tobin's Q, the measurement we use for firm value. The first set of estimations is pooled Ordinary Least Squares ("OLS") regressions.[60] Columns (1)-(2) include only the variables used by Bebchuk and Cohen.[61] We refer to these columns as the Bebchuk-Cohen Model. Columns (3)-(4) include

[58] This is done because we use industry fixed effects in our models so these observations do not contribute towards the identification of the coefficient of the staggered board variable.

[59] *See* MASS. GEN. LAWS Chapter 156D, § 8.06 (1990).

[60] All estimated models include year and industry fixed effects, using two-digit SIC codes. Thus the estimation reflects differences between firms with different characteristics within a given industry. The tests of statistical significance employ standard errors that are clustered by firms. This is because the same firms appear multiple times in the regression and then the unexplained residuals for each firm over some years may not be independent. For example, if a firm has an unobserved characteristic that makes its value deviate from that which is predicted by the model, the residual values for the firm over the years will not be independent. The clustering procedure accounts for this and consequently affects the statistical significance of the results. The estimated standard errors that we use are also robust to heteroskedasticity (i.e., to being non-constant across observations) and serial correlation using the robust Huber-White sandwich estimator.

[61] Column 1 excludes the variable stockholding by insiders (Insider Ownership) since the inclusion of this variable greatly reduces the number of firm-years with available data. Because data on Insider Ownership began only in 1992 whereas the sample begins in 1990, including Insider Ownership moves the starting year of our sample from 1991 to 1993 since we lag all explanatory variables by one year.

additional variables which theoretically may affect firm value and have been absent in the Bebchuk-Cohen model.[62] We refer to these columns as the Additional Variables Model.[63] The dependent variable is logQ which is the logarithmic value of Tobin's Q.[64] Q is calculated as the ratio of market value of assets to book value of assets, as used by Bebchuk and Cohen, among others.[65] By using logQ as our dependent variable we replicate the Bebchuk and Cohen analysis and aim to determine the effect of various firm characteristics, including the presence of absence of a staggered board, on firm value.

[62] Column (4) includes stockholding by both insiders (Insider Ownership) and institutions (Institutional Holdings) which reduces the sample size compared to column (3).

[63] The Additional Variables Model includes more variables than the Bebchuk-Cohen Model and has less firm-years (11 percent less observations in column (3) compared to column (1)) and 24 percent less observations in column (4) versus (2)).

[64] The dependent variable in most of our analysis is logQ (the natural logarithm of Q) rather than Q, which is the dependent variable in Bebchuk and Cohen's analysis. The regression model fits the data much better with logQ as the dependent variable compared to Q. This means that the effect of the explanatory variables on Q is non-linear. Other researchers use logQ when studying the effects of some variables on firm value. For example, Professor Griliches and more recently Professors Sanders and Block show that the effect on the firm's value of its intangible capital, measured by its R&D expenditures, patents and trademarks, is explained in a model where the dependent variable is logQ. Zvi Griliches, *Market value, R&D, and patents*, 7 ECON. LET. 183 (1981); Phillip Sandner & Joern Block, *The market value of R&D, patents, and trademarks*, 40 RES. POL. 969 (2011).

[65] Bebchuk & Cohen, *supra* note 2.

Table 1

The Effect on Firm Value of a Staggered Board, Controlling for Other Variables[66]

The dependent variable is logQ, where Q is the ratio of the firm's market value to book value of assets. All variable definitions are in Appendix Table A1

	(1)		(2)		(3)		(4)	
Staggered Board	**-0.023**	****	**-0.025**	****	**-0.015**		**-0.015**	
	(-2.110)		**(-2.292)**		**(-1.457)**		**(-1.302)**	
Log(Total Assets)	-0.021	***	-0.018	***	-0.085	***	-0.106	***
	(-4.697)		(-3.655)		(-9.595)		(-10.197)	
Log(Age)	-0.012		-0.010		-0.021	***	-0.017	**
	(-1.490)		(-1.117)		(-2.760)		(-2.017)	
Delaware	0.023	*	0.022	*	0.027	**	0.029	**
	(1.908)		(1.797)		(2.278)		(2.236)	
Return on Assets	1.899	***	2.044	***	1.602	***	1.689	***
	(20.674)		(20.049)		(15.085)		(13.065)	
Capital Expenditures	-0.131		-0.267	**	0.014		-0.239	**
	(-1.280)		(-2.287)		(0.156)		(-2.119)	
R&D	0.311	***	0.440	***	0.311	***	0.409	***
	(7.262)		(8.637)		(7.987)		(7.913)	
R&D missing	-0.116	***	-0.108	***	-0.071	***	-0.061	***
	(-7.705)		(-6.654)		(-5.112)		(-4.046)	
Insider Ownership			0.135				0.131	
			(1.315)				(1.087)	
Asset Growth					-0.126	***	-0.135	***
					(-7.618)		(-7.161)	
Sales Growth					0.103	***	0.077	***
					(4.441)		(2.638)	
S&P500					0.205	***	0.202	***
					(13.534)		(11.235)	
Leverage					-0.022		0.002	
					(-0.608)		(0.045)	
Profit Margin					0.283	***	0.304	***
					(6.978)		(6.437)	
Stock Illiquidity					-0.371	***	-1.304	***
					(-4.177)		(-9.174)	
Liquid Assets					0.143	***	0.129	**
					(3.083)		(2.494)	
Number of Deals					0.000		0.000	
					(0.885)		(0.130)	
No Deals					-0.034	**	-0.029	*
					(-2.535)		(-1.873)	
Industry Sales Share					0.497	***	0.552	***
					(4.232)		(4.282)	
Institutional Holdings							-0.183	***
							(-5.138)	
N	27,016		21,806		23,962		16,599	
Firms	2,961		2,456		2,593		2,006	
R^2	0.408		0.442		0.435		0.479	

[66]. The standard errors are clustered by firm. *, ** and *** indicate significance at the 10%, 5% and 1% level, respectively.

The results across the four columns (1)-(4) are that Staggered Board has a negative effect on firm value, as found by Bebchuk and Cohen.[67] However, the effect of Staggered Board is statistically insignificant in the Additional Variables Model, columns (3) and (4). The effect of Staggered Board is statistically significant only in columns (1) and (2) which employ Bebchuk and Cohen's variables.[68] In columns (3) and (4), which include our additional explanatory variables, the coefficients of Staggered Board are less negative and are not statistically significant. The test statistics imply that even if there is no relationship between Staggered Board and logQ, there is a chance of between 1/7 and 1/5 (for columns (3) and (4), respectively) that we erroneously find such a relationship because of randomness in the data. Another way to illustrate this is that under these findings if we say that a staggered board affects firm value, there is a probability of nearly 20% that this statement is wrong and in reality there is no such effect. Formally, this probability is much higher than the standard 5% benchmark or a chance of 1/20. We thus conclude that there is no significant negative linear relationship between logQ and Staggered Board.[69]

The estimated coefficients of the variables that we add to the model (columns (3) and (4)) are mostly significant implying that they should not be absent from a model determining the effect of a staggered board on firm value. Importantly, in Table 3 below we show that some of these added variables are significantly related to Staggered Board, thus their absence from the regression model in columns (1) and (2) may bias the estimation of the effect of Staggered Board on logQ. A test of whether the 10 additional variables increase the explanatory power of the model find that their contribution is highly statistically significant.[70]

In Table 2 we add to the model the variable Modified E-Index,[71] the entrenchment index of Bebchuk, Cohen, and Ferrell net of the staggered board provision which appears separately in the model. Modified E-Index, which includes a count of five governance-related provisions but here excludes the staggered board provision (which appears separately in the model), controls for

[67] Bebchuk & Cohen, *supra* note 2, at 427.
[68] *Id.*
[69] We replicate the analysis using as dependent variable Q, as do Bebchuk and Cohen, instead of logQ. The fit of this model to the data is inferior to that when using logQ, which we use in our analysis. When using Q as dependent variable, the effect of Staggered Board is negative and significant in the Bebchuk-Cohen model. However, it becomes insignificant in the Augmented Variables model.
[70] A test of the contribution of the additional variables in model (3) vs those in model (1) yields a value of $F = 51.0$ with a p-value < 0.001, which implies a very high significance.
[71] *See supra* note 10 and accompanying text.

the existence of governance or agency problems in the firm.[72] Across firms, there is a strong positive correlation between Staggered Board and Modified E-Index. That is, firms that have a staggered board are more likely to have other governance-related provisions. Bebchuk and Cohen also account for this issue by using in their regressions a related governance index, the G-Index devised by Gompers, Ishii, and Metrick.[73] By including measures of corporate governance the goal is to account for how those measures affect firm value directly rather than indirectly through their influence on, or relationship with, staggered board.

Table 2
The Effect on Firm Value of Staggered Board and a Modified E-Index[74]
The dependent variable is logQ, where Q is the ratio of the firm's market value to book value of assets. All variable definitions are in Appendix Table A1

	(1)		(2)		(3)		(4)	
Staggered Board	**-0.009**		**-0.013**		**-0.000**		**-0.005**	
	(-0.844)		**(-1.183)**		**(-0.029)**		**(-0.403)**	
Modified E-Index	-0.024	***	-0.025	***	-0.028	***	-0.023	***
	(-4.842)		(-4.889)		(-5.524)		(-4.114)	
N	27,016		21,806		23,962		16,599	
Firms	2,961		2,456		2,593		2,006	
R^2	0.410		0.444		0.438		0.480	

The estimation results in Table 2 show that in the presence of Modified E-Index, the coefficient of Staggered Board is not significantly different from zero while the coefficient of Modified E-Index is negative and highly significant.[75] Notably, the insignificance of the value effect of a staggered board is not only statistical but also economical, meaning that the magnitude of the effect of staggered board, measured by its coefficient, is practically zero in columns (3) and (4). We conclude that firms with more governance-related measures that are

[72] *See* Bebchuk, Cohen & Ferrell, *supra* note 2.
[73] *See* Gompers, Joy & Metrick, *supra* note 53.
[74] The Modified E-Index is the Bebchuk, Cohen, and Ferrell's Entrenchement Index excluding Staggered Board whose effect is estimated separately. The regressions also include all control variables that appear in Table 1 but their coefficients are not reported to save space.
[75] One reason that the value effect of a staggered board is insignificant when Modified E-Index is included in the model is the positive correlation of 0.23 between these variables which is highly significant ($p < 0.001$) in the sample that includes all variables (those that appear in columns (4) and (8)). When Modified E-Index is excluded (columns (1)-(4)), its effect is partially assumed by Staggered Board but when Modified E-Index is included in Panel B, its effect on logQ is estimated directly while that of Staggered Board is considerably weakened to the extent of becoming indistinguishable from zero.

included in Modified E-Index have lower value, as proposed by Bebchuk, Cohen, and Ferrell. But after accounting for the effect of governance problems, the value effect of a staggered board is insignificant.

The negative value effect of Modified E-Index is puzzling given that the components of Modified E-Index hardly affect the likelihood of a firm being acquired. Modified E-Index includes five corporate governance measures: the poison pill, golden parachute, supermajority vote requirement for mergers, limits to amend bylaws, and limits to amend the charter.[76] In theory, none of these should have a significant effect in terms of entrenching the board and consequently on firm value. Golden parachutes may make a takeover more costly, but typically have no potency in stopping hostile acquisitions. The effect of a poison pill should be already incorporated in the firm's value whether or not the firm has explicitly adopted a poison pill, since every firm potentially has a shadow poison pill which can be adopted by the board of directors at any time.[77] The other provisions in Modified E-Index are also not considered to be potent in stopping hostile takeover bids or significant determinants of firm value. Indeed, Bebchuk, Cohen, and Ferrell point out that the documented negative relation between the entrenchment index (E-Index) and firm value "does not establish that entrenching provisions … cause lower firm value."[78]

A possible explanation for the negative value effect of Modified E-Index is that the provisions included in it are symptoms of the firm having an agency problem, which cannot be directly observed. Firms with high Modified E-Index score may have poorly performing boards, which is reflected in both a higher propensity of managers to adopt (or retain) the provisions in Modified E-Index and in lower firm value.[79] As a result there is a negative correlation between Tobin's Q and Modified E-Index even if the provisions in Modified E-Index are not potent deterrents of hostile takeover bids and are not the cause for the lower firm value.[80] Similarly, the

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[76] *See* Bebchuk, Cohen and Ferrell, *supra* note 2.

[77] *See* John C. Coates IV, *Takeover Defenses in the Shadow of the Pill: A Critique of the Scientific Evidence*, 79 TEX. L. REV. 271, 317 (2000); Marcel Kahan & Edward B. Rock, *How I Learned to Stop Worrying and Love the Pill: Adaptive Responses to Takeover Law*, 69 U. CHI. LAW REV. 871 (2002). *See also* Emiliano Catan, *The Insignificance of Clear-Day Poison Pills* (New York University School of Law, Working Paper No. 16-33, 2016), https://ssrn.com/abstract=2836223.

[78] Bebchuk, Cohen and Ferrell, *supra* note 2, at 785.

[79] An alternative explanation is that more provisions in Modified E-Index are adopted (or retained) when management perceives a problem in the firm that needs to be rectified. Then, causality does not run from Modified E-Index to firm value but rather in the opposite direction. That is, it is the lower firm value – perhaps a temporary problem in management's view, which can be remedied – that leads to the higher score of Modified E-Index.

[80] A question that arises here is: If the provisions that are the components of Modified E-Index are not potent, why do some managers adopt or keep them? It could be that some managers believe that these provisions help or at least will

staggered board provision may be an indication for the existence of a value-reducing agency problem in the firm rather than a cause for the value reduction. When a better indicator of agency problems – Modified E-Index – is included in the model, the effect of staggered board becomes insignificant.[81]

We further test whether the value effect of a staggered board depends on the magnitude of Modified E-Index. If a higher Modified E-Index indicates a more severe agency problem in the firm, a staggered board provision would have a more negative value effect if it enables the problem to persist. We test this hypothesis by adding to the model the interaction term Staggered Board*Modified E-Index.[82] The coefficient of this variable should be negative if a staggered board exacerbates the value loss due to Modified E-Index. We find that the coefficients of both Staggered Board and Staggered Board*Modified E-Index are insignificantly different from zero, while the coefficient of Modified E-Index remains negative and highly significant. We conclude that the effect of staggered board on firm value is insignificant even in conjunction with Modified E-Index.[83]

In conclusion, we observe that the previously documented negative effect of Staggered Board on firm value is not robust to what we term model specification. Specifically, its effect becomes statistically insignificant when we account for the omitted variables problem we have previously highlighted.

b. The determinants of a staggered board

Our analysis in Table 1 and Table 2 includes variables that have been hitherto omitted from empirical analyses of the staggered board's value effect since we theorize that they affect the likelihood of a firm having a staggered board. If these variables were not related to

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not hurt. It could also be that a firm in trouble offers a generous golden parachute (one of the provisions in Modified E-Index) in order to attract a good manager who otherwise would not want to work there. Then, again, the negative relation between Modified E-Index and firm value does not mean that the former causes the latter but that it is the other way around.

[81] Testing the robustness of the results, we split the sample period into two sub-periods and estimate the effect of Staggered Board on logQ for each sub-period using the model of Table 2. We find that the coefficient of Staggered Board is not significant in any of the sub-periods. Even when the model does not include Modified E-Index, as is the case in Panel A, we find that the coefficients of Staggered Board in columns (3) and (4) in the two sub-periods are not significantly different from zero, especially for the second sub-period. This finding is grist for further study, but one explanation for this may be that the market has learned over time that a staggered board is harmless on average, or it developed governance mechanisms that rendered a staggered board non-consequential.

[82] Full results of all unreported tests available upon request.

[83] In unreported results we perform robustness tests, replicating our analysis using industry fixed effects that employ the Fama-French industrial classification, as do Bebchuk and Cohen. Our results with this industrial classification are similar to those reported in Table 1, though the effect of Staggered Board here is weaker (less significant) than in Table 1. The coefficient on Staggered Board becomes insignificant even in a model that is similar to that in column (1).

Staggered Board, their omission from the models in Tables 1 and 2, which estimate the effect of a staggered board on firm value, would not have biased the estimated effect of Staggered Board. In Table 3 we address this issue by analyzing the determinants of the staggered board to find out whether the results in Tables 1 and 2 are attributable to omitted variables.

Table 3 presents estimates of the effects on Staggered Board of the variables that are included in the Additional Variables Model in Table 1. The dependent variable is Staggered Board which equals 1 if the firm has a staggered board. The models also include the variable Past 3yr Return, the average annual stock return over the preceding three years.[84] We theorize that Past 3yr Return negatively affects the likelihood of the firm having a staggered board. Following negative past performance, management may feel that the firm is vulnerable to acquisition "on the cheap" by a hostile raider.[85] It may then want to implement a strategic plan to improve its performance but because outside stockholders may not be fully informed about the benefits of this plan, its effect will not be immediately reflected in the stock price.[86] On the other hand, managers in fairly priced firms or in overvalued firms will not have such a concern and will not mind if their firm is acquired. Such managers may remove or not want to adopt a staggered board provision.[87]

[84] The model also includes industry fixed effects based on two-digit SIC classification. The results are qualitatively similar when using the 49 Fama-French industries.

[85] Professor Catan has similar findings in the context of poison pills, namely that they are adopted subsequent to stock price drops. *See* Catan, *supra* note 77. We do not take a stand here on whether a staggered board is a potent deterrent to hostile acquisitions; it suffices that some managers believe so and adopt a staggered board or retain a staggered board as means of protection against a hostile acquisition. We discuss this *infra* at Part IV.

[86] Alternatively, management could be biased in believing that its plan will succeed (otherwise they would not have implemented it) and thus it will attempt to adopt or retain a staggered board provision hoping that it would buy the firm time to improve its value.

[87] The variable Past 3yr Return is not included in Table 1 because we find that it does not affect firm value (log Q) given that the model includes other performance variables which affect firm value, and since the variable Past 3yr Return is measured with a gap of one year before the current year.

Table 3
The Determinants of Staggered Board[88]
The dependent variable equals 1 if the firm has a staggered board.
All variable definitions are in the Appendix Table A1.

	(1)		(2)	
Log(Total Assets)	-0.030	***	-0.036	***
	(-6.835)		(-6.526)	
Log(Age)	-0.033	***	-0.037	***
	(-6.148)		(-5.796)	
Delaware	-0.018	***	-0.033	***
	(-2.614)		(-3.915)	
Past 3yr Return	-0.019	***	-0.018	**
	(-3.214)		(-2.160)	
Return on Assets	-0.031		-0.032	
	(-0.816)		(-0.686)	
Capital Expenditures	0.024		-0.142	*
	(0.356)		(-1.776)	
R&D	-0.065	***	-0.117	***
	(-5.474)		(-6.623)	
R&D missing	-0.009		-0.007	
	(-0.946)		(-0.589)	
Insider Ownership			-0.112	*
			(-1.754)	
Asset Growth	0.026	*	0.035	*
	(1.719)		(1.888)	
Sales Growth	-0.039	**	-0.044	**
	(-2.383)		(-2.222)	
S&P500	-0.037	***	-0.050	***
	(-3.593)		(-4.062)	
Leverage	-0.040	*	-0.037	
	(-1.779)		(-1.340)	
Profit Margin	-0.084	***	-0.070	***
	(-4.087)		(-2.799)	
Stock Illiquidity	-0.190	***	-0.324	***
	(-7.317)		(-5.077)	
Liquid Assets	-0.184	***	-0.226	***
	(-7.184)		(-7.460)	
Number of Deals	-0.000	***	-0.000	***
	(-3.018)		(-4.670)	
No Deals	0.071	***	0.059	***
	(8.215)		(5.828)	
Industry Sales Share	0.463	***	0.472	***
	(5.672)		(4.960)	
Institutional Holdings			-0.099	***
			(-4.085)	
N	22,353		16,173	
Firms	2,493		1,953	
R^2	0.068		0.082	

[88] The explanatory variables are those that appear in columns (3) and (4) of Table 1, with the addition of Past 3yr Return. The model also includes industry fixed effects using two-digit SIC code and year fixed effects. The standard errors are clustered by firm. *, ** and *** indicate significance at the 10%, 5% and 1% level, respectively.

We find that the incidence of a firm having a staggered board is not random; rather, it has economic explanation. In particular, past performance variables have negative effect on whether the firm has a staggered board. Firms that do well – those with faster sales growth, higher profit margins, and past stock price appreciation – are less likely to adopt and retain a staggered board. We also observe that size, firm age, and the dummy variable for whether the firm is included in the S&P 500 index have a significant negative coefficient suggesting that larger, more mature, and more established firms are less likely to have a staggered board. Firms with higher R&D spending, higher leverage, and higher asset liquidity are also less likely to have a staggered board. Also, firms with higher institutional ownership and with higher stock illiquidity are less likely to have a staggered board. Finally and perhaps surprisingly, more takeover activity in a firm's industry is negatively related to the likelihood of a firm having a staggered board. This finding remains for further study.

The importance of having a broad set of variables to explain logQ in Tables 1 and 2 is evident from our findings in Table 3 that some of these variables have *conflicting* effects on logQ and on Staggered Board. We find in Table 3 that the very firm characteristics that positively affect value are those that make Staggered Board unnecessary and hence enter with a negative coefficient in Table 3 (or vice versa).[89] This may explain why the negative and significant effect of Staggered Board on logQ in columns (1) and (2) in Table 1 becomes insignificant in columns (3) and (4) when we add control variables to the model. The omission of these variables from models (1) and (2) in Table 1 biases the effect of Staggered Board on logQ and makes us believe that a staggered board affects firm value while in fact, the estimated negative effect of Staggered Board on Q is due to the effect of a missing variable on both Staggered Board and Tobin's Q.[90]

[89] To illustrate, consider the variable Liquid Assets, the firm's asset liquidity. It positively affects logQ (columns (3) and (4) in Table 1) and is negatively related to Staggered Board (Table 3). If Liquid Assets is omitted from the determinants of logQ, its negative association with Staggered Board and its positive relation to logQ will be expressed as a negative relation between Staggered Board and logQ. When Liquid Assets is included in the model in Table 1, its positive effect on logQ is estimated directly and not through Staggered Board, and thus the negative effect of Staggered Board becomes weaker and insignificant. The same analysis applies to R&D which has strong positive effect on logQ and strong negative effect on Staggered Board. Other variables have conflicting effects on logQ and Staggered Board – Sales Growth, S&P500, Profit Margin, and No Deals – and thus their omission from the models in Table 1 would bias the coefficient of Staggered Board there, showing it to have a negative effect on Q.

[90] The variable Modified E-Index has conflicting relation with logQ and Staggered Board. It is negatively correlated with the former variable and positively correlated with the latter. Its inclusion in the model explaining firm value renders the effect of Staggered Board insignificant.

c. The effect of a staggered board on firm value using firm fixed effects

The scope of the staggered board debate has changed due to the recent research of Cremers, Litov, and Sepe which has led to dueling accusations about the true effect of a staggered board.[91] These authors present evidence on a *positive* effect of a staggered board on firm value when estimating the model with firm fixed effects.[92] As we discussed above, firm fixed effects control for unobserved *time-invariant* firm characteristics (or characteristics that change very slowly) which pertain to the effect of a firm's staggered board on its value. Since we cannot always observe all the firm characteristics that affect value and the incidence of having a staggered board, the use of firm fixed effects is a "catch all" way to control for these characteristics. However, some firm characteristics change over time and these changes may induce firms to adopt a staggered board or to de-stagger their board, and at the same time they affect firm value. The reason for the earlier results may be related to unobserved changing characteristics which caused the relationship between a staggered board and value. It may have been these changing characteristics themselves rather than related changes in staggered board that affected value. By splitting the sample, we allow for the unobserved firm characteristics to vary over time and have their own effect on value, and then we observe that the effect on value that has been attributed to a staggered board becomes insignificant. Not recognizing such changes may bias the estimated effect of a staggered board on firm value.[93]

In testing the findings of Cremers, Litov, and Sepe we first estimate the effect of Staggered Board on firm value for the entire sample, assuming that the unobserved firm characteristics remain constant over this entire period. Then, we estimate the same model over two sub-periods of (approximate) same length of time, assuming that the unobserved firm characteristics remain invariant within each of these sub-periods. Notably, the second sub-period is characterized by a wave of de-staggering of corporate boards, principally driven by the efforts of the Harvard Rights Project. The dependent variable is again logQ, in order to examine the effect of our variables on firm value, and the main explanatory variables are Staggered Board and Modified E-Index. We also use the Additional Variables Model, the comprehensive set of control variables that we use in columns (3) and (4) of Tables 1 and 2. In Panel A of Table 4,

[91] *See* Cremers, Litov and Sepe, *supra* note 3.
[92] This result is consistent with earlier findings. *See* Cremers & Ferrell, *supra* note 3; Cremers, Litov & Sepe, *supra* note 2.
[93] Naturally, not all firms in the sample stay in it for the entire 23-year period. In our sample, the average number of years a firm stays in the sample is 15.2 and the median number is 16 years.

columns (1) to (3), we report results for the Additional Variables Model. Panel B reports results for the Additional Variables Model, with the addition of two ownership variables, Insider Ownership and Institutional Holdings. We add these variables in order to better assess the effect of shareholdings on the presence or absence of a staggered board. In both panels, columns (4) to (6) replicate columns (1) to (3) with the addition of Modified E-Index.[94]

Table 4
The Effect of Staggered Board on Firm Value, using Firm Fixed Effects[95]
The dependent variable is logQ, where Q is the ratio of the firm's market value to book value of assets. All variable definitions are in Appendix Table A1

Panel A: Models without ownership variables									
Sample period:	Entire period		Sub-period 1	Sub-period 2	Entire period		Sub-period 1	Sub-period 2
	1991-2013		1991-2002	2003-2013	1991-2013		1991-2002	2003-2013
	(1)		(2)	(3)	(4)		(5)	(6)
Staggered Board	**0.025**		**-0.023**	**0.017**	**0.031**	******	**-0.021**	**0.019**
	(1.596)		**(-0.798)**	**(1.047)**	**(1.964)**		**(-0.703)**	**(1.149)**
Modified E-Index					-0.014	***	-0.005	-0.009
					(-2.867)		(-0.601)	(-1.605)
N	24,295		11,753	12,471	24,295		11,753	12,471
R^2 (within)	0.249		0.170	0.268	0.250		0.170	0.268

Panel B: Including ownership variables									
Sample period:	Entire period		Sub-period 1	Sub-period 2	Entire period		Sub-period 1	Sub-period 2
	1993-2013		1993-2003	2004-2013	1993-2013		1993-2003	2004-2013
	(1)		(2)	(3)	(4)		(5)	(6)
Staggered Board	**0.036**	******	**-0.002**	**0.018**	**0.040**	******	**0.001**	**0.019**
	(2.047)		**(-0.062)**	**(1.152)**	**(2.284)**		**(0.034)**	**(1.210)**
Modified E-Index					-0.013	**	-0.006	-0.005
					(-2.269)		(-0.608)	(-0.858)
N	16,650		7,096	9,482	16,650		7,096	9,482
R^2 (within)	0.273		0.195	0.298	0.274		0.195	0.298

For the entire sample period we observe that the coefficient of Staggered Board is positive and mostly significantly different from zero, consistent with the results of Cremers,

[94] *See* Cremers, Litov & Sepe, *supra* note 3. We use year and firm fixed effects to replace the use of year and industry fixed effects from Table 1.

[95] The table presents the results from firm fixed effects regressions. To save space, we report only the coefficients of Staggered Board and Modified E-Index, sample size (N), and the R2 of the model. All regressions include firm and year fixed effects. The standard errors are clustered by firm. *, ** and *** indicate significance at the 10%, 5% and 1% level, respectively.

Litov, and Sepe. This applies to both Panels, A and B. The weaker significance of the coefficient of Staggered Board here may be attributed to the fact that our model includes additional explanatory variables. The coefficient of Staggered Board remains positive and its statistical significance rises in Panel A when Modified E-Index is added to the model. The coefficient of Modified E-Index is negative and significant, consistent with the results reported earlier in Table 2.

However, the coefficient of Staggered Board becomes statistically insignificant in both panels once the sample is split into two sub-periods of approximately equal length and the model is estimated for each period. Importantly, the coefficient of Staggered Board is not consistent across the sub-periods but rather flips between being negative in the first and positive in the second. The takeaway from this analysis is consistent with our conclusion following the analysis in Tables 1 and 2. A staggered board has no significant effect on firm value.

The result that a staggered board does not affect firm value in a significant way is consistent with recent evidence presented by Cremers and Sepe on the value effect of board de-staggering related to the Harvard Rights Project.[96] They state (emphasis added):[97]

> [f]irm value generally declined after board declassification, but only board declassification in Harvard Shareholder Rights Project targets is associated with a statistically significant reduction in firm value. *Declassifications at firms not targeted by the SRP have a statistically and economically insignificant association with firm value*.

The conclusion of Cremers and Sepe that de-staggering has no significant effect on value of firms not targeted by the Harvard Rights Project is consistent with ours because the firms targeted by the Harvard program are a very small number of the staggering and de-staggering cases in our sample. Our analysis in Table 4, which extends over the years 1991-2013, includes 61 cases of staggering and 297 cases of de-staggering, a total of 358 instances of a change in staggered board status. On this basis, we estimate that de-staggerings in firms targeted by the Harvard Rights Project constitute about 14% of the de-staggering cases in our sample.[98] In addition, Cremers and Sepe point out that even among the Harvard Rights Project-targeted firms, the negative effect of a de-staggering on firm value was confined to firms with high research and

[96] Cremers & Sepe, *supra* note 6.
[97] *Id.* at 5-6.
[98] We calculate this by noting that Cremers and Sepe find that half of board destaggering cases in 2012-2014 were in firms targeted by the Harvard Rights Project. Of these cases, 83 occurred in 2012-2013, a time that is included in our sample period. Accordingly, about 42 destaggering cases in our sample are expected to have been a result of the actions of the Harvard Shareholder Rights Project, which is about 14% of the destagerring cases in our sample.

development expenditures.[99] It follows that for about 90% of our sample, our results that a staggered board has no significant effect on firm value are consistent with the results of Cremers and Sepe for firms that were not targeted by the Harvard Rights Project.

d. A Note On Endogeneity

Our results on the insignificant effect of a staggered board on firm value are supported by further analysis that we perform in our paper *Do Staggered Boards Affect Firm Value?*[100] There, we address an issue with prior studies of the staggered board and firm value, specifically, that the implementation of a staggered board defense – its adoption, retention, or deletion – is a choice made by firms.[101] It is affected by firm characteristics and by the views and objectives of its decision makers.[102] This raises a problem of selection and endogeneity. This major empirical issue was also acknowledged by Bebchuk and Cohen.[103] The question is whether a staggered board affects firm value, or whether it is the other way around and instead it is adopted due to management's reaction to a firm's low value. Underperforming firms may decide to adopt a staggered board in order to stall a potential underpriced takeover attempt and to enable the implementation of performance-enhancing policies.[104] In such a scenario the staggered board is not the cause of a low firm valuation but a symptom or a consequence of it. The question is, then, whether we can infer from the negative relation between a staggered board and firm value that the former is the cause of the latter or the other way around.[105]

This endogeneity problem raises the need for an analysis using an *exogenous* event associated with a staggered board adoption (or rejection). Such an event is independent of the firm's characteristics and therefore can help determine only the effect of the staggered board on

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[99] *Id*.

[100] Yakov Amihud, Markus Schmid and Steven Davidoff Solomon, *Do Staggered Boards Affect Firm Value?* (June 29, 2017), available at https://ssrn.com/abstract=2948141.

[101] More specifically, a staggered board requires that it be approved by the firm's board and then approved by the firm's shareholders if placed in the certificate of incorporation. A staggered board can also be placed in the firm's bylaws without shareholder approval, but this is known as an ineffective staggered board since shareholders can unilaterally remove the staggered board by amending the bylaws. *See generally* Bebchuk, Coates & Subramanian, *supra* note 15, at 894.

[102] An exception is the legislation of staggered board in the state of Massachusetts. *See infra* text and accompanying note 59.

[103] *See* Bebchuk & Cohen, *supra* note 2, at 410-411; Alma Cohen & Charles C.Y. Wang, *How Do Staggered Boards Affect Shareholder Value? Evidence from a Natural Experiment*, 110(3) J. FIN. ECON. 627 (2013) (asserting that prior studies of staggered board had observed negative correlation between a staggered board and firm value but that "[s]uch correlation, however, might not imply causation but could reflect the greater propensity of low-value firms to maintain such provisions.")

[104] *See generally* Bates et al., *supra* note 3 (examining empirically the reasons for adoption of staggered boards).

[105] Cremers & Sepe, *supra* note 5, at 105 (asserting that prior staggered board studies "are intrinsically limited in their ability to address endogeneity concerns—that is, the ever-present risk that correlation might be mistaken for causation.")

firm value. An example of such an event is the mandatory legislation of staggered boards by the state of Massachusetts in 1990. The state of Massachusetts in response to a hostile bid by BTR, an English firm, against Norton, a Massachusetts company, passed a statute requiring that all public companies in Massachusetts have a staggered board.[106] Boards could opt out, but were permitted to opt back in at any time. Maryland has passed a similar statute, though it has received much less attention.[107]

Professor Swartz, who studies the value consequences of the Massachusetts legislation mandating staggered boards, finds that the law had no significant effect on the stock values of firms which had no staggered board, neither on the introduction day nor on the passage day of the law. Examining the differential value effect of the law on firms with and without a staggered board, he found that there was no significant difference in the value effect of the law between the two groups. There was, however, a difference in price reaction between firms with and without already existent antitakeover amendments in their corporate charters.[108] The value of those firms without antitakeover provisions declined by 16 percent.[109] In a recent study of this event by Robert Daines, Shelley Xin Li, and Charles Wang,[110] the authors find that the imposition of a staggered board on firms led to an increase in Tobin's Q for younger, innovative firms and evidence that this is attributable to increased R&D and capital expenditure. The authors note that their findings cover a dataset different than that of Swartz which included more mature firms.

Another exogenous event is two Delaware court rulings in 2010, which arguably affected the potency of the staggered board provision.[111] Cohen and Wang found that these rulings affected the value of Delaware-incorporated firms in a way that indicated that a staggered board is value decreasing, that is, increasing its potency reduces firm value and weakening it raises firm value.[112] However, Amihud and Stoyanov found that after making adjustments in the

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[106] Mick Swartz, *The Massachusetts Classified Board Law*, 22 J. ECON. FINAN. 29 (1998).

[107] *See* Section 3-803 (1999) of the Maryland General Corporation Law. For a discussion of this statute see Venable, Board Classification in Maryland: Evaluating Section 3-803 of the MGCL, Apr. 9, 2014, https://www.venable.com/files/Publication/3034aa4a-28b2-433d-ad23-7b0e894bf2f6/Presentation/PublicationAttachment/3bfe9eaa-5f0b-49be-8ccb-94992ec7deec/Venable_Maryland_Law_Memo_Board_Classification_in_Maryland_Evaluating_Section_3-803_of.pdf

[108] Swartz, *supra* note 107, at 31. For these purposes Swartz defines antitakeover amendments as provisions in a firm's corporate charter designed to limit takeovers other than a staggered board.

[109] *Id.*

[110] Robert Daines, Shelley Xin Li and Charlie Wang, *Can Staggered Boards Improve Value? Evidence from the Massachusetts Natural* Experiment (Sept. 2016) (working paper) (electronic copy available at https://ssrn.com/abstract=2836463).

[111] The history of these rulings is detailed in Davidoff, *supra* note 13.

[112] *See* Alma Cohen & Charles C.Y. Wang, *Reexamining Staggered Boards and Shareholder Value*, J. FIN. ECON. (forthcoming 2017).

estimation procedure and in the data, changes in the potency of a staggered board had no significant effect on firm value.[113] These results are consistent with the findings of Swartz on the Massachusetts staggered board law and our own findings that a staggered board has no significant effect on firm value.

Bebchuk and Cohen address the endogeneity issue by estimating the firms' value (i.e., its Tobin's Q) as a function of the firms' staggered board as of 1990, when the ISS database began to document the phenomenon. They suggest that in firms with staggered boards in 1990, shareholders had no power to remove it, while "shareholders were generally unwilling to permit existing firms to adopt charter-based staggered boards during the 1990s".[114] The two authors thus theorize that subsequent effects of the staggered board are not related to firm characteristics but rather the "exogenous" event of a staggered board being present in 1990. In this estimation of firms' value as a function of staggered board provisions in 1990 they find again that the effect of staggered board on firm value is negative and significant.[115]

In our paper, *Do Staggered Boards Affect Firm Value?*, we address the endogeneity problem by employing the common method of instrumental variables. This method recognizes that staggering or de-staggering of corporate boards is a matter for firm choice, and it identifies instrumental variables which explain these governance changes. The requirement is that the selected instrumental variables affect only the incidence of the firm having a staggered board without directly affecting its value. We have already seen from the evidence of Table 3 that the incidence of a staggered board is not random but instead it is a function of firm characteristics.[116] Here, we augment the set of explanatory variables by a set of instrumental variables.

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[113] *See* Yakov Amihud & Stoyan Stoyanov, *Do Staggered Boards Harm Shareholders?*, J. FIN. ECON. (forthcoming Apr. 2016), https://ssrn.com/abstract=2686902. The assertions by Amihud and Stoyanov were disputed by Cohen and Wang in a second piece. *See* Alma Cohen & Charles C.Y. Wang, *Staggered Boards and Shareholder Value: A Reply to Amihud and Stoyanov* 15–16 (Harvard Business School, Working Paper No. 16-097, 2016).

[114] Bebchuk & Cohen, *supra* note 2, at 426.

[115] We also address the selection issue in this second paper. More specifically, firms with a staggered board may have characteristics which lend itself to a staggered board such as a low stock price relative to firm value as measured by Tobin's Q. We do so by recognizing that the de-staggering of corporate boards is now common. Since the Bebchuk-Cohen study, which ends in 2002, many firms destaggered their boards (350 in the ISS sample, 291 in our sample), and between 1990 and 2013, 101 firms adopted staggered boards (69 are included in our sample). This enables us to address the selection problem by studying the determinants of the choice of firms adopting, having or removing staggered boards.

[116] There is strong evidence that the incidence of a staggered board provision is not random across firms. Across industries, there is a large variation in the likelihood of a firm having a staggered board provision. We find that the fraction of firm-years with a staggered board in an industry ranges between 6% and 87%. The difference in the incidence of staggered board among firms across industries is highly significant; the likelihood that these differences are due to chance is less than 0.001. If staggered board adoption and retention or de-staggering by firms were random, there would be no systematic differences between industries in the likelihood of firms in the industry having staggered board.

We find that the (instrumented) staggered board has no significant effect on firm value.[117] This result is obtained under both methods, that of Bebchuk and Cohen and that of Cremers, Litov, and Sepe. In both models, the coefficient of Staggered Board is insignificantly different from zero.[118] These results on the insignificant value effect of a staggered board after having accounted for endogeneity are consistent with the results presented in this paper.

IV. Policy Implications

Our finding that a staggered board has no significant effect on firm value does not discredit earlier studies which found significant negative or positive effects of a staggered board. Instead, our findings suggest caution in proposing that the staggered board in and of itself creates wealth effects. A staggered board may be beneficial in some firms while being detrimental in others, depending on their characteristics and on the reasons for having the staggered board, and still in other firms it is non-consequential. On average, a staggered board cannot be said to have an effect in one way or another. Therefore, a policy dictum on staggered board that equally applies to all firms is, in our view, inappropriate.

Our findings also do not mean that in the heat of a takeover battle the staggered board has no real effect in either frustrating a bid or causing a higher premium to be paid. Prior studies have addressed these issues, and our study takes no position on them.[119] But what our results do show is that on average and looking forward at the firm's operations as a whole, the staggered board does not produce a wealth effect for companies. This implies that the staggered board in general does not serve as an entrenching device which facilitates managerial waste.

The existence of staggered board or its lack thereof is not random. It is more likely to be observed among firms with poor past performance that are incorporated in some states and it is ubiquitous in certain industries and less common in others. The dependence of having a staggered board on firm characteristics reflects a conscious, systematic choice by some firms to have or not to have a staggered board, although it does not exclude the possibility that in some

[117] The instrumental variables that we include in our analysis are the following. We use four dummy variables for four states of incorporation (Massachusetts, New York, California, and Pennsylvania, as well as Past 3yr Return which we use as a variable that determines the incidence of a staggered board. While these variables are strong determinants of the incidence of the firm having a staggered board, they do not predict firm value. In some tests, we use two additional instruments which make use of peer firms' characteristics and were identified by Professors Karpoff, Schonlau, and Wehrly. *See* Jonathan M. Karpoff, Robert J. Schonlau and Eric W. Wehrly, *Do Takeover Defense Indices Measure Takeover Deterrence?* REV. FIN. STUD. (forthcoming).

[118] The insignificant value effect of Staggered Board is obtained without including Modified E-Index in the model, and remains insignificant when we include Modified E-Index.

[119] *See* Bebchuk, Coates and Subramanian, *supra* note 15.

cases the staggered board is unnecessarily adopted or mistakenly removed (or absent in the first place). For example, better performing firms, or firms with stronger market power, are less likely to adopt and retain a staggered board, or they are more likely to de-stagger their board. This is evidence in support of the theoretical notion that companies adopt a staggered board to prevent an undervaluing takeover, and that for firms in competition, takeover-impeding measures are nonconsequential. Ultimately, this is a basis to analyze a staggered board on an individual company basis. In all, our analysis highlights the likely idiosyncrasy of the staggered board.

Our results set a path for future research on the staggered board. Bebchuk and Cohen as well as Cremers, Litov, and Sepe have set an admirable standard for initial research on this matter. Future research may further examine the problems of omitted variables by testing more thoroughly the reasons for the adoption, maintaining and deleting a staggered board provision. It may also examine whether market monitors can function independently of the staggered board to substitute for this governance function ameliorating its idiosyncratic effects. Further work can more finely examine under what conditions and in which industries the staggered board serves an appropriate corporate governance function. Finally, it is important to note that the analysis done on this issue is based mainly on companies included in the ISS database, which covers the S&P 1500 firms. There has been a paucity of research of the staggered board and its wealth effects in smaller companies due to a lack of available data. It is uncertain whether the results found in larger, more closely observed companies will hold for smaller companies. Yet, in terms of market value and the effect on the economy, the companies in the S&P 1500 list are the most important.

More generally, our findings have implications for other corporate governance studies[120] which could also be plagued by the omitted variables that are correlated with governance provisions and their exclusion may attribute their effects to the governance measures under study.[121] This can inform the debate over whether "one-size-fits-all" governance is appropriate for companies with different characteristics. Our results are thus in line with the study of Professors Cain, McKeon, and Davidoff Solomon who examine 16 takeover laws and find that

[120] *See generally* Michael Klausner, *Fact and Fiction in Corporate Law & Governance*, 65 STAN. L. REV. 1325 (2013) (asserting that the failure of empiricists to pay attention to institutional facts, has biased prior corporate governance studies).

[121] *See* Ben Hermalin & Michael Weisbach, *Boards of Directors as an Endogenously Determined Institution: A Survey of the Economic Literature*, 9 ECON. POL'Y REV. 7 (2003). *See also* Lucian A. Bebchuk & Michael S. Weisbach, *The State of Corporate Governance Research*, 23(3) REV. FIN. STUD. 939 (2010).

previous studies which had attributed negative wealth effects from the adoption of business combination laws were instead observing effects from other variables.[122] Similarly, Professors Catan and Kahan show that earlier studies on the effects of business combination laws do not withstand further scrutiny. Professor Catan also shows in the context of poison pills that there is a need to control for the variables that brought about the adoption of the poison pill.[123] The collective findings thus highlight that in examining other studies, accounting for econometric estimation issues is likely important.[124] Like our results on staggered boards, this also suggests a measure of caution in wholesale acceptance or rejection of corporate governance provisions which apply uniformly to firms without clear empirical support.[125]

The staggered board debate highlights that in the first instance, the parties are resorting to the empirical evidence and their interpretation of the findings to justify policy prescriptions for the treatment of a staggered board, as well as for the proper contractual arrangement of the board among shareholders and the company. We applaud this resort to empirical evidence to justify these policy prescriptions. Yet as we show, when proper controls for omitted variable bias are included, there does not appear to be a value effect of the staggered board as a whole: it neither reduces nor increases value. At a minimum our findings are contrary to the call by Cremers and Sepe for a quasi-mandatory board. In addition, our findings also mitigate against a *per se* ban of a staggered board. Instead, our findings point to the staggered board being idiosyncratic and endogenous, good for some companies but not all and perhaps bad for others.

These findings also inform views of attempts to eliminate the staggered board in the S&P 500. The Harvard Rights Project claims that it successfully was able to reduce the presence of a

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[122] *See generally* Matthew D. Cain, Stephen B. McKeon, and Steven Davidoff Solomon, *Do Takeover Laws Matter? Evidence from Five Decades of Hostile Takeovers*, J. FIN. ECON. (forthcoming) (detailing various takeover laws and their application to New York and California companies).

[123] Emiliano M. Catan & Marcel Kahan, *The Law and Finance of Antitakeover Statutes*, 68 STANFORD L. REV. 629 (2016)

[124] The need for caution we suggest is consistent with the findings of Professors Black, de Carvalho, Khanna, Kim and Yurtoglu. *See* Bernard Black, Antonio G. de Carvalho, Vikramaditya Khanna, Woochan Kim & Burcin Yurtoglu, *Corporate Governance Indices and Construct Validity*, available on SSRN http://ssrn.com/abstract=2838273. The authors examine prior studies of corporate governance indices like the E-index and find that these indices are often constructed based upon vague governance measures or unobserved governance characteristics. In the words of the authors, "[O]ften we are unsure both as to what is 'good' governance, and how one can proxy for this vague concept using observable measures." This too can be said about studies of the effects of the staggered board provision. Our results show that previous beliefs of its effect – whether it is "good" or "bad" – does not hold on closer econometric scrutiny.

[125] For other articles making this point, see Matthew D. Cain, Jill Fisch, Sean Griffith & Steven Davidoff Solomon, *How Corporate Governance is Made: The Case of the Golden Leash*, 164 U. PA. L. REV. 649 (2016); Randall S. Thomas, *The Increasing Role of Empirical Research in Corporate Law Scholarship*, 92 GEO. L.J. 981, 983-84 (2004).

staggered board from 60% to 15% of these companies.[126] Our findings do not mitigate state intervention to either ban or require the staggered board. Instead, our findings mitigate each firm making an individualized choice. In today's complex capital markets, large capitalized companies likely face forces and pressures that counteract a staggered board's force and pull and otherwise pressure otherwise entrenched boards to act in a way that is aligned with stockholders' interests regardless of whether a staggered board is present (or not). In such a circumstance a staggered board may not be necessary nor can it be harmful, and company responsiveness to the Harvard Rights Project supports this idea.

V. Conclusion

We revisit the question of whether a staggered board affects firm value, given conflicting results in prior studies. Bebchuk and Cohen found that a staggered board has negative effect on firm value, a result supported by subsequent studies, while a recent study by Cremers, Litov, and Sepe finds that the effect of a staggered board on firm value is positive. These conflicting results are supported by differing theoretical arguments: opponents of the staggered board claim that it induces and perpetuates underperformance by firms while proponents claim that it helps create long-term value.

We contend that previous studies on the effect of a staggered board on firm value did not include firm characteristics and performance measures that affect firm value and at the same time are correlated with the incidence of a firm having a staggered board. Therefore, the effects of these omitted variables has been mistakenly attributed to a staggered board. We analyze the Bebchuk and Cohen study and include more explanatory variables and find that in our more comprehensive model, the estimated negative effect of a staggered board becomes insignificantly different from zero. That is, the negative value effect that has been attributed to the staggered board is in fact due to variables that have been omitted in earlier analysis. We also find that the results in the study of Cremers, Litov, and Sepe which finds positive firm value in the staggered board are not robust. We split the sample period of years into two sub-periods and find that the effect of a staggered board on firm value is not significantly different from zero in either sub-periods.

Our results highlight that the value effect of the staggered board provision appears to be firm specific. In general, there is no evidence that on average it is harmful or helpful for all

[126] *See Bebchuk, Hirst & Rhee, supra* note 35.

firms. Our results indicate caution in any wholesale advocacy for adoption or for removal of the staggered board. They also suggest that policy proposals for mandatory staggered boards or a *per se* ban on these boards appear to be lacking in definitive empirical support. The staggered board debate is thus not about *per se* rules but whether the staggered board is right for individual firms.

Appendix Table A.1
Descriptive statistics for the variables used in our analysis

The sample includes all firm-years between 1991 and 2013 for all firms on the ISS database (which includes governance provisions) for which data are available on the Compustat. Q is the ratio of the firm's book value to its market value. All variables that follow have their values for the previous year. Staggered Board equals 1 for firms with a staggered board; Modified E-Index is Bebchuk, Cohen and Ferrell's (2008) entrenchment index of six governance-related provisions, which excludes staggered board (hence its value ranges from 0 to 5); Log(Total Assets) is the logarithm of the firm's total assets (the table reports TA, i.e., total assets in million USD); log(Age), the logarithm of the firm's age (the table reports Age, i.e., firm age in years); Delaware is a dummy variable that equals 1 if the firm is incorporated in Delaware (zero otherwise); Return on Assets is return on assets, defined as EBITDA divided by lagged total assets; Capital Expenditures is capital expenditures relative to assets; R&D is the ratio of research and development expenditures to sales; R&D missing is a dummy variable that equals 1 if the form does not report R&D; Insider Ownership is insider holdings, the share of the company's stock held by the top five officers in the company; Asset Growth is the one-year growth rate of total assets (which may reflect recent acquisitions); Sales Growth is the one-year growth rate of sales; S&P500 equals 1 if the firm is in the Standard and Poor's 500 index; Leverage is the ratio of total debt (long term and short term) to the firm's total assets; Profit Margin is the ratio of the difference between sales and cost of goods sold to total sales; Stock Illiquidity is the Amihud (2002) illiquidity measure, defined as the average daily ratio of absolute stock return to dollar volume over the year – we exclude the top 1% of daily observations within each year and require at least 150 daily observations to compute the annual variable; Liquid Assets is the asset liquidity, defined as current assets minus the difference between current liabilities and debt in current liabilities, all divided by total assets. Number of Deals is the number of acquisitions in the industry and No Deals is a dummy variable that equals 1 if Number of Deals = 0. Both of these deal variables are based on four-digit SIC codes. Industry Sales Share is the firm's sales share in the total industry share, using two-digit SIC codes. In the calculation of Industry Sales Share we use all Compustat firms. Institutional Holdings is the share of the company's stock held by institutional investors;; Past 3yr Return is the average annual stock return over the last three years. All ratios are winsorized at the 1% and 99% level to avoid outliers. The sample excludes REITs, dual-class share firms, and firms in the lowest and highest 1% of market capitalization in the respective year. We also delete an entire industry if all firms in that industry either have a staggered board or do not have a staggered board.

Variable	Mean	Median	Stdv.
Q	1.795	1.422	1.157
Staggered Board	0.592	1.000	0.491
Modified E-Index	1.620	2.000	1.061
Log(Total Assets)	9,521	1,577	57,228
Log(Age)	26.485	22.000	18.742
Delaware	0.589	1.000	0.492
Return on Assets	0.145	0.136	0.115
Capital Expenditures	0.061	0.043	0.064
R&D	0.055	0.000	0.316
R&D missing	0.474	0.000	0.499
Insider Ownership	0.031	0.007	0.066
Asset Growth	1.105	1.060	0.262
Sales Growth	1.098	1.070	0.240
S&P500	0.319	0.000	0.466
Leverage	0.236	0.224	0.183
Profit Margin	0.366	0.334	0.225
Stock Illiquidity	0.086	0.043	0.158
Liquid Assets	0.237	0.212	0.189
Number of Deals	47.664	13.000	111.666

No Deals	0.287	0.000	0.452
Industry Sales Share	0.032	0.008	0.061
Institutional Holdings	0.675	0.708	0.232
Past 3yr Return	0.114	0.059	0.536